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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,170	11/14/2001	Eugene P. Matter	42390P12396	7336

8791 7590 07/22/2005

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EXAMINER	
MCLEAN MAYO, KIMBERLY N	
ART UNIT	**PAPER NUMBER**
2187	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,170	MATTER ET AL.	
	Examiner	Art Unit	
	Kimberly N. McLean-Mayo	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6-10,12 and 16-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6-10,12-14 and 16-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The enclosed detailed action is in response to the Amendment submitted on May 9, 2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4, 6, 9-10, 16, 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama et al. (USPN: 5,140,681) in view of Blumrich (USPN: 6,493,800) Regarding claims 1, 10, 16 and 18-19, Uchiyama discloses an apparatus comprising an individual memory device including a memory array (Figure 5; Figure 2, Reference 5) having a first portion (Figure 5, Reference 61) and a second portion (Figure 5, Reference 62), the first portion of the memory array being different than the second portion of the memory array, wherein the memory array is adapted such that the first portion of the memory array is accessible only by a first processor (C 5, L 28-31) and the second portion of the memory array is accessible only by a second processor (C 5, L 30-31), wherein the memory array further comprises a third portion that is different than the first portion and the second portion (Figure 5, References 60 and 63), the third portion of the memory array accessible by both the first processor and the second processor (C 5, L 26-28). Uchiyama does not disclose dynamically altering a size of the first and second portion of the memory array depending on an operational load of the first and second processor. However, Blumrich discloses dynamically altering a size of the first portion and the

second portion of a memory array depending on an operational load of the first and second processor (C 2, L 29-43; C 6, L 61-67; C 7, L 1-67). This feature taught by Blumrich provides improved performance by providing efficient memory usage based on the operating conditions of the system. Hence, it would have been obvious to one of ordinary skill in the art to use Blumrich's teachings with the system taught by Uchiyama for the desirable purpose of improved performance and efficiency.

Regarding claims 4, Uchiyama and Blumrich disclose the memory portions coupled to a same power supply potential (the portions are part of a single memory device and thus are coupled to the same potential as the memory device).

Regarding claims 9 and 21, Uchiyama and Blumrich disclose the memory comprises memory selected from the group consisting of static random access memory, dynamic random access memory, read only memory, electrically erasable and programmable read only memory and flash memory (Uchiyama discloses a memory device which encompasses any memory device).

4. Claims 7-8, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama et al. (USPN: 5,140,681) in view of Blumrich (USPN: 6,493,800) as applied to claims 1 and 10 above and further in view of Cherabuddi (PGPUB: US 2202/0184445).
Uchiyma and Blumrich disclose the limitations cited above, however, they do not disclose the first processor accessing the first portion of the memory array substantially simultaneously as the second processor access the second portion of the memory array. However, Cherabuddi

discloses the first processor accessing the first portion of the memory array substantially simultaneously as the second processor access the second portion of the memory array (pages 3-4, section [0034]; - the first and second processor are granted exclusive access simultaneously to the first and second amount of memory and thus the first processor may read to the first portion of memory simultaneous with the second processor writing to the second portion of memory). This feature taught by Cherabuddi improves the performance of the system by processing multiple instruction/processes at the same time. One of ordinary skill in the art would have recognized this benefit afforded by Cherabuddi's teachings and would have been motivated to use Cherabuddi's teachings in the system taught by Uchiyama and Blumrich for the desirable of purpose of improved performance.

5. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama et al. (USPN: 5,140,681) in view of Blumrich (USPN: 6,493,800) as applied to claims 1 and 10 above and further in view of Yokota (USPN: 4,930,066).

Uchiyamam and Blumrich disclose the limitations cited above, additionally they disclose the first and second portions of the memory coupled to a same power supply potential (the memory portions are part of a single memory device and thus are coupled to the same potential as the memory device), however, they do not explicitly disclose the memory portions coupled to a same clock signal. Yokota discloses memory portions coupled to a same clock (Figure 2). This feature taught by Yokota provides synchronization and provides memory access at the speed of the clock thereby improving the performance of the system. Hence, it would have been obvious

to one of ordinary skill in the art to couple the memory portions in the system taught by Uchiyama and Blumrich for the desirable purpose of improved performance.

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Olarig (PGPUB: US 2003/0065886) – dynamic cache partitioning

Song – (PGPUB: US 2003/0084247) – shared and private memory partitions

Nicholson – (USPN: 5,293,622) – shared and private memory partitions

Luan – (USPN: 5,911,149) – dual bus architecture and partitioned memory

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 703-308-9592. The examiner can normally be reached on Tues, Thr, Fri (10:00 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KIMBERLY MCLEAN-MAYO
PRIMARY EXAMINER

Kimberly N. McLean-Mayo
Examiner
Art Unit 2187

KNM

July 20, 2005